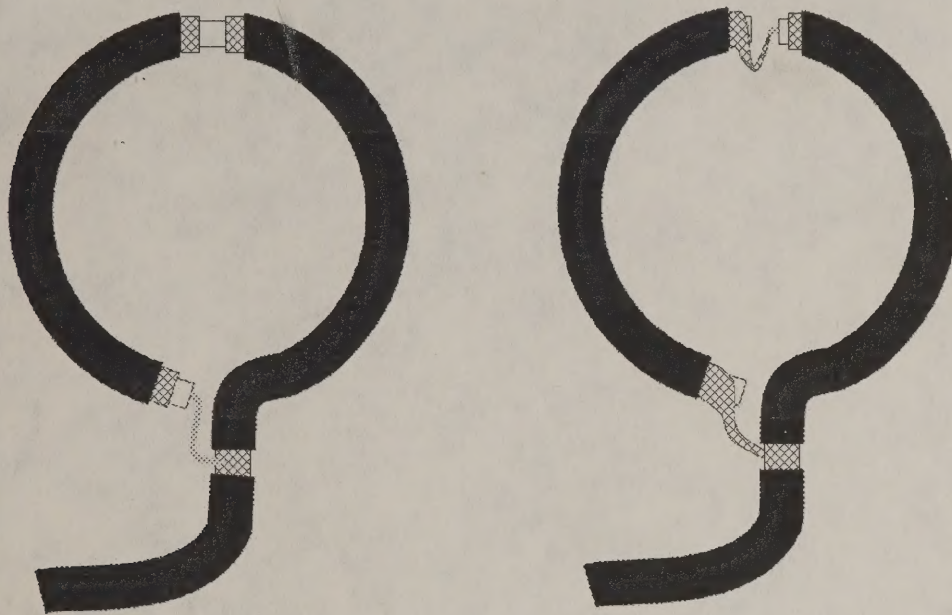
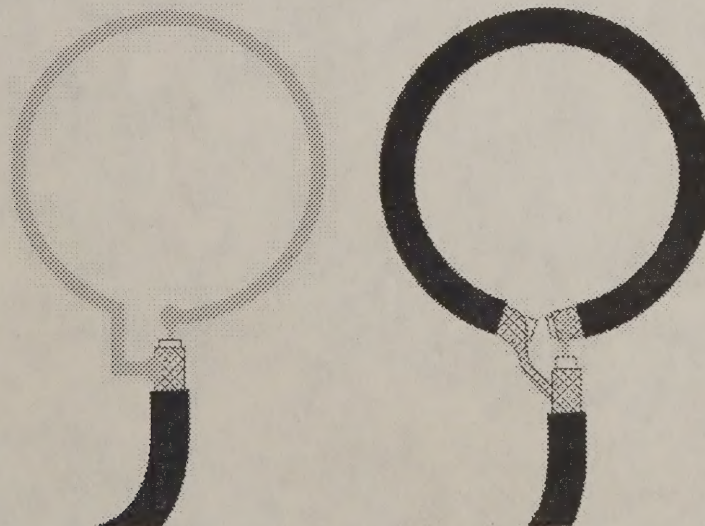


If one seeks loop mode purity and figure-8 pattern symmetry with deep side nulls, the fully balanced Faraday transformer coupled subsidiary broadband impedance matching loop with its 5:1 diameter ratio would be the preferred choice of feed structure. Figure 4 below illustrates the construction of the Faraday feed loop. Mounting rigidity is achieved with the use of either RG-213 or LDF4-50 heliax for constructing the feed loop.



**Figure 4 Alternative constructions for shielded Faraday loop**

A variation of the shielded / Faraday feed loop is the simpler unshielded loop illustrated below in Figure 5. The loop is placed at the bottom centre directly opposite the top side tuning capacitor with the coax outer braid optionally connected to the main loop at its central neutral point. The diameter is again  $1/5$  that of the main radiating loop element.



**Figure 5 Unshielded coupling loop**

$$\begin{array}{r}
 380 \\
 \times 1.4 \\
 \hline
 152.0 \\
 380 \\
 \hline
 502
 \end{array}$$

$$\begin{array}{r}
 89 \\
 \times 1.4 \\
 \hline
 124.60
 \end{array}$$

$$675 \text{ (a)} \quad 135 \text{ ma}$$

$$640 \text{ (b)} \quad 192 \text{ ma}$$